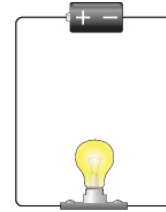


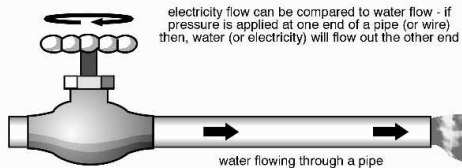
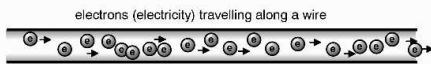
Chapter 11.1 Cells & Batteries

What is an electric circuit?

- ▶ A closed path along which electrons that are powered by an energy source can flow.
- ▶ [animation](#)

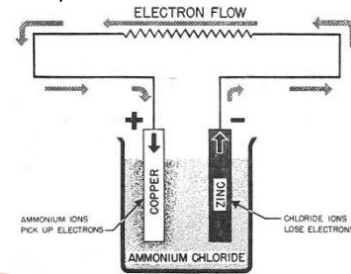


Electric current is like water flowing through a pipe:



Voltaic Cells

- ▶ Generates an electric current by chemical reactions involving 2 different metals or metal compounds separated by a solution that is a conductor.



Terminology

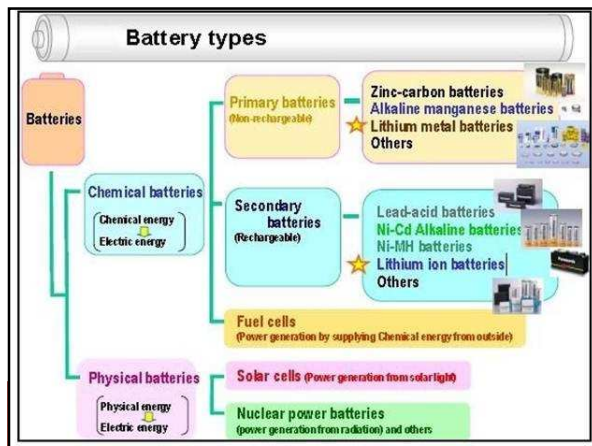
- ▶ **Cells:** single voltaic cell (i.e. AA, D, etc.)
- ▶ **Battery:** a connection of one or more cells
- ▶ **Electrode:** Metal terminals in cell or battery
- ▶ **Electrolyte:** a solution or paste that conducts charge



Types of Cells?

- ▶ **Dry Cell** = cell that contains an electrolyte (paste)
- ▶ **Wet Cell** = cell that contains a liquid electrolyte (i.e. sulfuric acid)
- ▶ **Primary cell** = cell that can be used only once (i.e. calculators, hearing aids, toothbrushes, etc.)
- ▶ **Secondary cell** = cell that can be recharged (i.e. lead-acid battery for in cars, trucks, etc.)



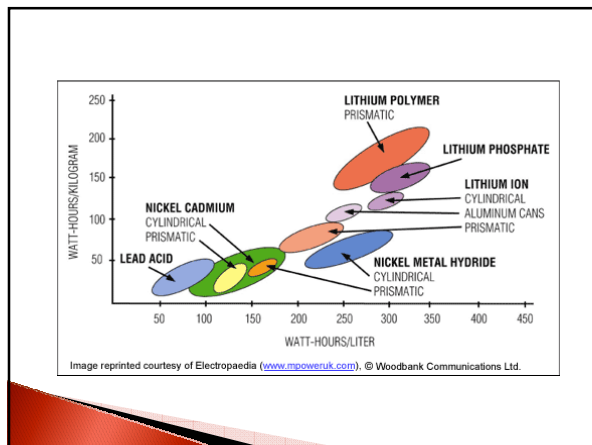


More Types of Cells

- **Fuel Cells** = cell that generates electricity through the chemical reactions of fuel that is stored outside the cell (i.e. hydrogen fuel cell)



- **Solar Cells** = cell that converts sunlight into electrical energy



HOMEWORK

- READ P. 437 – 445
- #1 – 5, 8